

NEWBORN CARE IN AYURVEDA- A REVIEW

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ABSTRACT

Newborn care in Ayurved includes Pranapratyagamana or resuscitation of baby which adds striking two stones, sprinkling water, cleaning of oral cavity, putting cloth soaked in oil, giving madhu and ghrita for licking. Acharya Vagbhata has mentioned features of asphyxiated baby. After that cutting and care of umbilical cord is mentioned. Later Acharyas mentioned general nursing care of newborn includes bath, feeding (nutrition and fluid intake), clothing, maintenance of body temperature and protection from infections or *Rakshakarma*. For feeding Acharyas have given schedule for first 4 days, as most of the mothers do not have sufficient milk secretion. Also Acharyas have mentioned special *decoctions* as per different *dosha* for bath. In modern science newborn care is mentioned in detailed with the use of different instruments and protocol based management. Either Ayurveda or modern newborn cares both are expalient for the easy adaptation of baby after birth in outer environment without any complication so that newborn mortality as well as morbidity.

KEYWORDS: *Pranapratyagamana, Snana, Mukhavishodhna, Nalachedana, Jatakarma, Raksha karma.***INTRODUCTION**

Various Ayurved texts including *Charak Samhita*, *Sushruta Samhita*, *Ashtanghridaya* have been described new born care. In general, the care of a normally delivered newborn at birth includes prevention of asphyxia, hypothermia, early rooming in and initiation of breast feeding. The description related to care of newborn can be divided into following:

1. Immediate care of Newborn

- Ulva - Parimarjana (Cleaning of Vernix caseosa)
- Resuscitation of normal baby
- Resuscitation of unconscious or asphyxiated baby
- Cutting of umbilical cord

2. General Care

- Bath
- Feeding
- Bed and Clothes
- Protective measures.

AIMS AND OBJECTIVES

To study scientific background of new born care described in Ayurveda.

DISCUSSION**1. Immediate care of Newborn****(a) ULVA - Parimarjana**

Acharya Sushruta^[1] has advised to first and foremost clear/remove the *ulva* (vernix caseosa) from the body of newborn baby. Acharya Vagbhata^[2] has advised application a mixture of *saindhava* and *ghrita* for *ulva* parimarjana and further to massage the baby with *bala* oil which provides relief from stress/pressures undertaken by the baby during the birth process. The drug *Bala* (*Sidacordifolia*), mentioned here, according to Ayurveda, has the following properties^[3] - *balakaraka* (provide strength), *grahi* and cures (nashnaum) *vata*, *rakatapitta* (hemorrhagic/bleeding disorders), *raktavikara* and *vrana*. Research also corroborates these facts as *Sidacordifolia* (*bala*) showed following properties - antioxidant activity,^[4] anti-inflammatory effect,^[5] antimicrobial activity.^[6,7] After birth, massage with oil is popular in Indian culture and may prove beneficial as it provides insulation against heat and insensible water loss. Some oil may get absorbed through the thin skin of the baby to provide some nutrition. Touch (*saparsha*) is believed to improve neuromotor development of the baby by sending stimulatory signals to the brain. In all, *bala* oil massage therapy helps in promotion of strength, supports healthy neurological development, maintenance of health, and provides

warmth to newborn besides stimulating the nervous system into action soon after

(b) Resuscitation of normal baby

- Acharya Charak^[8] said that Sound should be produced by striking or rubbing two stones together, near the base of the ear of new born.
- Then Hot or cold water should be sprinkled over face of the child. For proper cleaning of oral cavity doctor should use his cleaned finger with cotton.
- Once the child is properly cleaned, anterior fontanelles should be protected by putting a cotton pad soaked in oil.
- Give ghrita mixed with saindhav to remove swallowed garbhodaka.

In modern science routine stomach wash is not advised in normal newborns but is advised in some special conditions like in babies born through a Caesarean section, severely asphyxiated babies, meconium stained amniotic fluid, polyhydramnios, infants of diabetic mothers, hypo plastic small for dates babies etc. For this, the prescribed method nowadays is stomach wash with normal saline using an appropriate length nasogastric tube.

After completing these processes, first feed of madhu and ghrita is offered. Susruta^[9] has changed the sequence of processes for resuscitation but had described amply processes analogical to Charaka and Vagbhata^[10] has also followed Susruta.

(c) Resuscitation of unconscious baby

Usually, Most of the newborn revive without any special effort. Few may suffer from deep unconsciousness. Charak mentioned to fan winnowing basket made of Vamsa (soop) or black broken earthen pot^[11] (Krishankapalika). Vagbhata^[12] asked to irrigate with Bala tail, fanning with winnowing basket and to enchant mantra in right ear of new born. He has also given features of asphyxiated baby: Deep unconsciousness, No cry, Decreased or unstable dhatu, Hypersensitivity of pain stimuli, Toxic look.

(d) Cutting and care of umbilical cord

Charak^[13] opines that after measuring the cord 8 angulas from the umbilicus, it is held with two fingers and to be cut with the ardhadharasastra. It should be made of gold, silver, iron or any other metal. The cut end of cord should be tied properly with thread and hanged loosely with the neck. Dalhana^[14] said that cord should be irrigated properly with Kusthaoil^[14] Vagbhata has advised that umbilical cord should be cut only four angula distal to umbilicus.

Nowadays, umbilical cord is clamped without delay after delivery. The first ligature is tied about 2-3 cm from the abdomen of the baby and second ligature is tied 5 cm from the abdomen. Then the cord is cut by use of clean blade/scissor in between these two ligatures and the cut

end is inspected for presence of normal anatomical contents of umbilical cord i.e. two arteries and one vein. A clean autoclaved thread, disposable cord clamp or a sterile rubber band is used for cord clamping. Cord is left as such with an aim to keep it dry and avoiding repeated handling to prevent sepsis. Inspection of the cord is advised at every 15-30 minutes for initial few hours after birth for early detection of any oozing from the cord which may occur due to loosening of ligatures and shrinkage of cord. Generally, the umbilical stump dries and falls off anytime between 5-10 days after birth.

2. General Care of Infant

(a) Bath

Sushruta said to massage with bala oil, then give bath. For that kala, dosha, bala of the child should be viewed.

Table 1: Dalhana^[15] has mentioned specific decoction as per different dosha.

Decoction	Dosha dominance
<i>Ksirivriksha</i>	Pitta
<i>Sarvangodaka</i>	Vats
Hot water prepared with immersing heated gold or silver rod	Less strength of baby
<i>Kapittha</i>	Less strength of baby

I. Ksheerivriksha consists of *Naygarodha* (*Ficus bengalensis*), *Udumber* (*Ficus glomerata*), *Ashwatha* (*Ficus religiosa*), *Parisha* (*Thespesia populnea*) and *Pakara* (*Ficus infectoria*). They have following properties – *kashaya rasa*, *sheet virya*, *ruksha*, *varnya* properties and cures *vrana* (wound), *meda*, *visrapa* (erysipelas), *shotha* (edema/inflammation), *pitta-kapha-raktaj vikaras*. Some Acharyas replaced *parisha* with *vetasa* (*Salix caprea*) and *shirisha* (*Albizia lebeck*). These herbal drugs also showed anti-infective properties as:

- 1) *Ficus bengalensis* showed antimicrobial activity,^[16,17] anti-inflammatory and analgesic activity.^[18]
- 2) *Ficus religiosa* showed antioxidant, wound healing and anti-inflammatory activity,^[19] and antimicrobial activity.^[20]
- 3) *Ficus glomerata* reported anti-inflammatory activity^[21] and antimicrobial activity.
- 4) *Thespesia populnea* showed antimicrobial activity,^[22] mast cell stabilization and antianaphylactic activity,^[23] and anti-inflammatory activity.^[24]
- 5) *Albizia lebeck* showed analgesic and anti-inflammatory activities,^[25] anti-arthritis and antioxidant property,^[26] analgesic and antipyretic activity.

II. Sarvagandha group consists of *Chaturjata* [which consists of *Dalchini* (*Cinnamomum zeylanicum*), *Tejapatra* (*Cinnamomum tamala*), *Ela* (*Elettaria cardamomum*), *Nagkesara* (*Mesua ferrea*)],

Kapura (*Cinnamomumcamphora*), Kankola (*Piper cubeba*), Aguru (*Aquilariaagallocha*), Shilarasa (*Liquidamberorientalis*), Lavanga(*Syzygiumcumini*)

These drugs^[27] are described with following properties as:

1. Dalchini (*Cinnamomumzeylanicum*): Tikta rasa, vatapittanashaka, balya (provide strength), cures thirst. It also showed anti-inflammatory activities,^[28] antimicrobial activity.^[29]
2. Tejapatra (*Cinnamomumtamala*): Madhura rasa, pichhila, laghu and cures kapha-vataja roga, arsha, aruchi, pinsa. It also showed antimicrobial activity,^[30] antioxidants activity^[31] and anti-inflammatory, analgesic and antipyretic activity^[32]
3. Ela (*Elettariacardamomum*): Katu in rasa, sheetvirya, laghu and cures kapha, shvsa, kasa, vataja roga This herb showed antimicrobial activity.^[33]
4. Nagkeshara (*Mesuaferrea*): Kasya rasa, usnavirya, ruksha, lagu, pachanum, and cures jvara, kandu, kustha, vamaana, visrpa, kapha-pittaj roga . It also showed anti-nociceptive and anti-inflammatory activity,^[34] antioxidant activity,^[35] and analgesic activity.^[36]
5. Kapura (*Cinnamomumcamphora*): Kaphanashaka, and cures kustha, kandu, vamaana.
6. Kankola (*Piper cubeba*): Laghu, tikshna, usnavirya, tiktain rasa and cures hridroga, kapha-vataja roga, daurgandata. During trial showed antimicrobial efficacy^[37] and antioxidant activity.^[38]
7. Aguru (*Aquilariaagallocha*): Usnavirya, katu-tikta in rasa, tikshna, laghu, beneficial for skin and cures eyediseases, vata-kapha roga .It also showed analgesic and anti-inflammatory activity,^[39,40] and antimicrobial activity.^[41]
8. Silarasa: Katu rasa, madhura, snigdha, usanavirya, kantikarka, and cures sweda, kustha, daha, jvara
9. Lavanga (*Syzygiumcumini*): Katu-tikta in rasa, laghu, sheetvirya, dipanum, pachaka, ruchikarka and cures kapha-pitta-rakta vikara, vaman, shula, kasa, shavsa, hikka. It also showed antimicrobial activity,^[42,43] anti-allergic activity,^[44] anti-inflammatory activity.^[45]

III. Shudha Swaran: Shudha Swaran (gold metal) have following properties as snighda, viryavardhaka, medhasmriti-budhi-varadhaka, agnivaradhaka, ruchivaradhaka and cures yahshma, unmada, sarvadoshaghana^[46] Shudha Rajat have following properties as kashya and amla in rasa, sheetal, lekhaana, snighda, dipana, balakaraka, ayustharykara, medhya and cures vata-kapha vikaras and sarvarogaapharum.

Nowadays, immediate bathing at birth is not practiced fearing the grave risk of cross infection and hypothermia. Generally, bathing of a newborn is postponed till its proper stabilization in terms of temperature, respiration etc. Moreover as nowadays most deliveries are institutional, in most hospitals no bath schedule is adopted during hospital stay of the baby to reduce

incidences of nosocomial infections. In contrast, nowadays, skin of the newborn is gently cleaned removing any secretions, mucus, blood and/or meconium. Further, it is advocated that the baby should be bathed or sponged using unmediated soap and clean lukewarm water.^[47] Soap is better to be restricted to body parts like groins, axillae and napkin areas. After this the baby is adequately clothed to avoid.

(b) Feeding

Mother milk is best for babies; most of mothers do not have sufficient secretion of milk. For that, Ancient scholars have specially prescribed feeding schedule of neonate for first 4 days.^[48]

Table No 2: Feeding schedule of neonate

Day	Feeding
1	Madhu + Ghrita + Ananta
2	Madhu + Ghrita + Laxmana
3	Madhu + Ghrita + Laxmana
4	Breastmilk

Also as per fluid requirement, baby can be given water.

The beneficial properties of the above mentioned drugs as propounded in *Ayurveda* and certain experimental studies are:

1. **Ghrita:** According to Acharya Charaka, ghrita cures pittaj and vataj rogas, rasa-sukra-ojashitkara, improves voice, varanprashadana^[47] according to Acharya Sushruta, ghrita enhances smriti, medha, kanti, swara, sukumarata, ojas, bala, vyasthapaka, netraya, rakshahagana, and cures unmada, apasmara, jvara, vat-pittaj roga etc.^[48]
2. **Madhu:** According to Acharya Charaka, madhu is kashaya and madhura in taste, shitavirya, sandhankara (er-union activity), chedana (herbs that help scrape away ama; also an expectorant), cures raktapitta (hemorrhagic/bleeding disorders) and kaphaj roga^[49] Honey has been shown in recent experimental studies to possess antimicrobial, antiviral,^[47] antioxidant,^[48] and consists of carbohydrates^[49] (mainly glucose and fructose) which provides energy^[50] etc.
3. **Breast milk:** Acharya Charaka described breast milk as jivanam, brihanam (anabolic), satmya (favourable/wholesome), snehanam (unctuous)^[51]. Acharya Sushruta^[48] said breast milk is madhura rasa (sweet), jivanam, pathyam, dipanam (digestive) etc.

These days exclusive breast feeding without the addition of infant formula or any solid food is advised for the initial six months right from first day of life. Artificial feeding is reported to be associated with likely morbidity from pneumonia, diarrhea, ear infections, necrotizing enterocolitis etc. in infants. Colostrum, the thick yellowish milk produced during first few days of lactation is rich in vitamins, proteins and protective antibodies and

hence must be administered to the newborn promptly. Otherwise also the breast milk contains an ideal balance of nutrients that promote growth and development of a baby and also promotes its ideal mental development. It has a number of nutritional benefits as high concentrations of lactose, presence of taurine and cysteine amino acids along with other proteins; amongst fats it is rich in polyunsaturated fatty acids and omega-2, 6 fatty acids. It contains disease-defending factors like immunoglobulin, macrophage, lymphocytes, lysozymes, epidermal growth factors etc. which are potent against allergies and various opportunistic infections.^[52]

(c) Clothes and bed

Sushruta and Vagbhata said to use soft cotton and silk cloth, keeping the head on east side.^[53]

(d) Protective Measures

Charak said to protect newborn from various infections:^[54]

- To use twigs of *adani*, *pilu*, *khadira*, *parushaka* for hanging.
- *Sarshapa*, *atasi*, *tandula* tied around and inside of *Sutikagara*. *Tandulabali* obligation should be given for 10 days.
- *Rakshoghna* drugs like *vacha*, *hing*, *sarsapa*, *atasi*, *lasuna* etc. are kept in a packet and hanged in upper portion of doorframe. Also small packets containing these drugs also are tied in the neck of the puerperal woman and newborn, over cooking pots water pots, bed.
- Inside *sutikagara*, fire should be lit daily with woods of *kanakakantaka* or *Tinduka*. Attendant present in *Sutikagara* should remain awake.
- *Santi homa* should be performed daily.

Susruta^[55] and *Vagbhata* also said same things using fumigation with *rakshoghna* drugs. They also said to tie *bhurjapatra* having hymen like *arya*, *aparajita* written with *gorochana*. *Vagbhata* 13 has advised that on 6th night of birth of the child, all the family members and friends remain awake and *raksha karma* should be performed by offering sacrifices.

The various drugs mentioned in *dhupana karma* have antiseptic and antimicrobial properties which have been proved so experimentally in various studies in recent times. Present neonatal care includes special aseptic measures to be adopted aiming to prevent any infection of the newborn. Right from the initiation of birth process, measures for sepsis and antisepsis such as clean hands, clean surface, use of sterile surgical instruments (blade/scissor), clean handling of the cord, use of surgical mask, gloves etc. are to be religiously followed until handling and resuscitation of the newborn baby. Appropriate hygiene is advised throughout the newborn care to decrease infection episodes during infancy.

CONCLUSION

In view of above description it can be concluded that newborn care mentioned by our Acharyas is not only wholesome, but scientific too. If these things are practiced along with modern science instruments and principles it will be highly beneficial to newborn baby.

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